

Eye Gaze

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The Eyegaze Edge is a piece of technology that allows people with physical disabilities to communicate and do other activities just by looking at buttons on a monitor. The device can access the internet, turn text into speech, play games, and sometimes control certain computers.

The Eyegaze Edge is commonly used in those with cerebral palsy, spinal cord injury, brain injury, ALS, multiple sclerosis, muscular dystrophy as well as a plethora of other disorders. However, the user has to have good control of their eyes and head. Users of the device sit in front of a monitor, which has a special camera placed below the monitor to track the user's eyes. A complex image processing software is used to analyze the images of the eye and determine where the user is looking on the screen.

To operate the Eyegaze Edge the user looks at rectangular keys on the monitor for a very small period of time, usually less than a second. To set up the device the user just needs to calibrate it by gazing at different circles. The whole calibration process takes less than a minute. One disadvantage to the Eyegaze Edge is that it uses infrared light and has trouble working in sunlight.

The price of one of these systems ranges from about 8000 dollars to about 12000 and there are various other features that can be added on for additional money.



In the article, the study looked at 10 girls who had Rett syndrome. They were asked to do tasks using a device [similar] to that of the Eyegaze Edge. The tasks included things such as following directions on the system like: “Look at: yellow, red, blue, triangle, square, circle, big, small, over, under.” The results showed that the older the child, the more correct “answers” they got. One of the children; however, only got half of the choices right. This may be in part due to the age of the girl (they varied in age from 4 to 13 years of age). The study showed that many of those with physical and cognitive disability can efficiently use an Eyegaze Edge system or an equivalent device.

Concepts of Color, Shape, Size and Position in Ten Children with Rett Syndrome (2009). Web. 24 Apr. 2010.

<http://www.eyegaze.com/>